



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,789	06/19/2001	Harand Gaspar	F1013/2008P	4351

7590 01/12/2005  
Kelly K Kordzik  
Winstead Sechrest & Minick PC  
P O Box 50784  
1201 Main Street  
Dallas, TX 75250-0784

EXAMINER

LE, VIET Q

ART UNIT	PAPER NUMBER
----------	--------------

2667

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/884,789	<b>Applicant(s)</b> GASPAR ET AL.	
	<b>Examiner</b> Viet Q. Le	<b>Art Unit</b> 2667	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Jason Alexander Trachewsky et al. (US 2001/0055311 A1), hereinafter referred to as Trachewsky.

Regarding claim 1, Trachewsky discloses a method for verifying collision detection and resolution in a home network, the home network comprising a plurality of stations wherein each station includes a host media access controller program and a media access controller (Trachewsky described the carrier sense multiple access / collision detect (CSMA/CD) media access control method that he implemented in the MAC controller. He also disclosed a home network of nodes competing access to the same transmission medium using CSMA/CD algorithm to avoid collisions. Each node comprises of a PHY, a MAC and a MAC program as indicated in fig. 4a. See fig. 2, 3a and 4a; See also paragraphs 160, 161 and 168), the method comprising the steps of:

Art Unit: 2667

transmitting a frame when a transmission channel is inactive (See paragraphs 160 and 168), when a collision is detected, ceasing transmission of the frame (See paragraph 160), choosing a back-off level (See paragraphs 160, 161 and 168), incrementing a back-off level counter in response to receiving back-off signal from another station on the network (See paragraphs 160 and 168), decrementing the back-off counter in response to successfully transmitting the frame (See paragraphs 160 and 168), and accessing the back-off level counter through the host media access controller such that collision resolution can be monitored without snooping signals over the network (See paragraphs 160 and 168).

Regarding claim 2, Trachewsky discloses the method further includes the step of deferring transmission of a frame when the transmission channel is active (Trachewsky described the carrier sense multiple access / collision detect (CSMA/CD) media access control method that he implemented in the MAC controller. He also disclosed a home network of nodes competing access to the same transmission medium using CSMA/CD algorithm to avoid collisions. See paragraphs 160).

Regarding claim 3, Trachewsky discloses the method further includes the step of transmitting a frame in one of a plurality of priority slots (See paragraph 168).

Art Unit: 2667

Regarding claim 4 and 12, Trachewsky discloses the method further includes the step of maintaining a first and second back-off level counters for each of the priority slots (See paragraph 168).

Regarding claim 5, Trachewsky discloses the method further includes the step of initializing the first and second back-off level counters to zero after a reset (See paragraph 168).

Regarding claim 6, Trachewsky discloses the method further includes the step of randomly choosing a back-off level by choosing back-off level signal slot and transmitting a back-off signal in that slot (See paragraph 168).

Regarding claim 7 and 13, Trachewsky discloses the method further includes the step of incrementing the first back-off level counter in response to receiving back-off signal from another station on the network (See paragraph 168).

Regarding claim 8 and 14, Trachewsky discloses the method further includes the step of in response to detecting a back-off signal in a slot prior to the back-off level signal slot chosen, increasing the back-off level by incrementing the second back-off level counter (See paragraph 168).

Regarding claim 9 and 15, Trachewsky discloses the method further includes the step of: when any station successfully transmits a frame, reducing the back-off level by one by decrementing the second back-off level counter if it is greater than zero, and when the second back-off level counter reaches zero transmitting the frame of the network (See paragraph 168).

Regarding claim 10, Trachewsky discloses the method further including the step of maintaining the first and second back-off level counters as 4-bit register type memories in the MAC (See paragraph 168).

Regarding claim 11, Trachewsky discloses a method for verifying collision detection and resolution in a home network (Trachewsky described the carrier sense multiple access / collision detect (CSMA/CD) media access control method that he implemented in the MAC controller. He also disclosed a home network of nodes competing access to the same transmission medium using CSMA/CD algorithm to avoid collisions. See Fig. 2, 3a and 4a; See paragraph 160), the home network comprising a plurality of stations wherein each station includes a host media access controller program and a media access controller (See Fig. 3a and 4a), the method comprising the steps of: transmitting a frame in one of a plurality of priority slots (See paragraph 168); providing the media access controller with at least one back-off level counter for each of the priority slots (See paragraph 168); in response to detecting a frame collision, ceasing transmission (See paragraph 160); resolving the collision by:

Art Unit: 2667

randomly choosing one from among a plurality of back-off level slots (See paragraph 168), transmitting a back-off signal in that slot (See paragraph 168); and monitoring the back-off level slots and incrementing the back-off level counter for each back-off signal detected (See paragraph 168), and decrementing the back-off level counter after a successful transmission (See paragraph 168), whereby transmission is deferred to stations having a lower back-off level count (See paragraph 168); and accessing the back-off level counters from the host media access controller program to verify that collision resolution is operating as intended (See paragraph 168), thereby eliminating the need to snoop signals over the network.

Regarding claim 16, Trachewsky discloses a home network comprising a plurality of stations (See Fig. 2 and 3a) wherein each station comprises, a control chip for implementing a home phone line network alliance specification (See Fig. 4a), the control chip including, a plurality of back-off level registers accessible by the host media access controller program (See Fig. 4a and Fig. 30, block 1000; See paragraph 161 and 168), the MAC further including, a transmit data path for transmitting frames of the network, each frame assigned a priority level that the first transmission of the frame to a slot corresponding to the priority level (See paragraph 168), wherein the frame is transmitted when a carrier sense signal is inactive (See paragraph 160), and transmission of the frame is suspended when a collision is detected (See paragraph 160), a Distributed Fair Priority Queuing (DFPQ) for resolving frame collisions by choosing one of a plurality of back-off levels and deferring to stations that have chosen

Art Unit: 2667

a lower back-off level (See paragraph 168), incrementing the back-off level counter when a back-off level signal is received from another station on the network (See paragraph 168), and once the station completes a transmission, reducing the back-off level by decrementing the back-off level counter (See paragraph 168), such that when the counter reaches zero the MAC transmits the frame (See paragraph 168); and a host media access controller program in communication with the MAC (See Fig. 4a) for accessing the back-off level counter to verify that collision detection and resolution are operating (See paragraph 160), thereby eliminating the need to snoop signals over the home network.

Regarding claim 17, Trachewsky discloses the home network wherein frame transmission deferral is ordered by up to 8 priority levels (Trachewsky described the use of 3 bits reserved for PHY level priority.  $2$  to the exponential of  $3$  is equal to 8 levels of priority. See paragraph 120).

Regarding claim 18, Trachewsky discloses the home network wherein there are three back-off levels (See paragraph 163).

Regarding claim 19, Trachewsky discloses the home network wherein the MAC includes one maximum back-off level counter and one back-off level counter for each of the priority levels (See paragraph 168).



Regarding claim 20, Trachewsky discloses the home network wherein the maximum back-off level counter indicates a number of back-off level signals received over the home network, and wherein the back-off level counter indicates the back-off level of the corresponding station (See paragraph 168).

Regarding claim 21, Trachewsky discloses the home network wherein the maximum back off level counter and the back-off level counter are part of the MAC (See Fig 30, block 1000; See paragraph 161).

Regarding claim 22, Trachewsky discloses a method for verifying collision detection and resolution in a home network (See paragraph 160), the home network comprising a plurality of stations wherein each station includes a host media access controller program and a media access controller (MAC) (See Fig. 2, 3a and 4a), wherein the MAC transmits frames in one of a plurality of priority slots (See paragraph 168), the method comprising the steps of: maintaining a first and second back-off level counters for each of the priority slots (See paragraph 168); initializing the first and second back-off level counters to zero after a reset (See paragraph 168), when a conflict is detected, randomly choosing a back-off level signal slot and transmitting a back-off signal in that slot (See paragraph 168); monitoring collision events and the back-off level signal slots (See paragraph 168); incrementing the first back-off level counter in response to receiving back-off signal from another station on the network to indicate a total number of back-off signals received (See paragraph 168); decrementing

Art Unit: 2667

the first back-off counter in response to successfully transmitting the frame to reduce a back-off level (See paragraph 168); in response to detecting a back-off signal in a slot prior to the back-off level signal slot chosen, increasing the back-off level by incrementing the second back-off level counter (See paragraph 168); when any station successfully transmits a frame, reducing the back-off level by one by decrementing the second back-off level counter if it is greater than zero (See paragraph 168); when the second back-off level counter reaches zero, transmitting the frame over the network (See paragraph 168); and monitoring and diagnosing the home network by reading first and second back-off level counters through the host media access controller program to verify that collision detection and resolution are operating as intended (See paragraph 160 and 168); thus eliminating the need to snoop signals over the network.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Eric Ojard et al. (U.S. 6,130,894), Off-Line broadband network interface.
- b) John T. Holloway et al. (U.S. 6,256,317), Packet switched multiple access network system with distributed fair priority queuing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Q. Le whose telephone number is 571-272-2246.


The examiner can normally be reached on 8 AM -5 PM.

Art Unit: 2667

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

vi

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 1/6/05